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Subject ⇒Javascript Objects

IN PREVIOUS LECTURE **(QUICK RECAP) Date-07/10/2020**	**In Today's Lecture (Overview)**
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JavaScript Objects

Real Life Objects, Properties, and Methods

In real life, a car is an object.

A car has properties like weight and color, and methods like start and stop:

Object	**Properties**	**Methods**
	car.name = Fiat	car.start()
	car.model = 500	car.drive()
	car.weight = 850kg	car.brake()
	car.color = white	car.stop()

All cars have the same properties, but the property values differ from car to car.

All cars have the same methods, but the methods are performed at different times.

JavaScript Objects

You have already learned that JavaScript variables are containers for data values.

This code assigns a simple value (Fiat) to a variable named car:

```
var car = "Fiat";
```

Objects are variables too. But objects can contain many values.

This code assigns many values (Fiat, 500, white) to a variable named car:

```
var car = {type:"Fiat", model:"500", color:"white"};
```

The values are written as name:value pairs (name and value separated by a colon).

JavaScript objects are containers for named values called properties or methods.

Object Definition

You define (and create) a JavaScript object with an object literal:

Example

```
var person = {firstName:"John", lastName:"Doe", age:50,
eyeColor:"blue"};
```

Spaces and line breaks are not important. An object definition can span multiple lines:

Example

```
var person = {

  firstName: "John",

  lastName: "Doe",

  age: 50,

  eyeColor: "blue"

};
```

Object Properties

The name:values pairs in JavaScript objects are called properties:

Property	**Property Value**
firstName	John

lastName	Doe
age	50
eyeColor	blue

Accessing Object Properties

You can access object properties in two ways:

```
objectName.propertyName
```

or

```
objectName["propertyName"]
```

Example1

```
person.lastName;
```

Object Methods

Objects can also have methods.

Methods are actions that can be performed on objects.

Methods are stored in properties as function definitions.

Property	**Property Value**

firstName	John
lastName	Doe
age	50
eyeColor	blue
fullName	function() {return this.firstName + " " + this.lastName;}

A method is a function stored as a property.

Example

```
var person = {
  firstName: "John",
  lastName : "Doe",
  id       : 5566,
  fullName : function() {
    return this.firstName + " " + this.lastName;
  }
};
```

The this Keyword

In a function definition, `this` refers to the "owner" of the function.

In the example above, `this` is the person object that "owns" the `fullName` function.

In other words, `this.firstName` means the `firstName` property of this object.

Read more about this keyword at JS this Keyword.

Accessing Object Methods

You access an object method with the following syntax:

```
objectName.methodName()
```

Example

```
name = person.fullName();
```

If you access a method without the () parentheses, it will return the function definition:

Example

```
name = person.fullName;
```

Do Not Declare Strings, Numbers, and Booleans as Objects!

When a JavaScript variable is declared with the keyword "`new`", the variable is created as an object:

```
var x = new String();         // Declares x as a String object

var y = new Number();         // Declares y as a Number object

var z = new Boolean();        // Declares z as a Boolean object
```

Avoid `String`, `Number`, and `Boolean` objects. They complicate your code and slow down execution speed.

Questions For self Practice

https://au-assignment.s3.ap-south-1.amazonaws.com/cc-62edbb73-cec5-4066-9b82-b760cf049796.pdf

Resource for the lecture

https://www.w3schools.com/js/js_object_definition.asp
Video Tutorial
https://www.youtube.com/watch?v=abP2q8eEXWg